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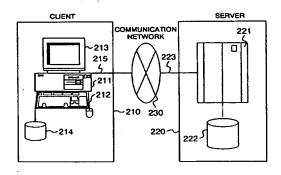
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(54)Electronic commerce support method and apparatus

(57)An electronic commerce support method for managing trading in a client (210) connected to a server (220) for providing electronic commerce services to receive the electronic commerce services includes the steps of: transmitting an order for a product on the electronic commerce in response to an input by a user to the server through a communication network, receiving trading information including a trading identifier associated with the order and data on the contents of the order from the server, and storing the trading information in a storage device (214) (111,112); receiving from the server trading processing information including a present status of processing for processing initiated for the order, a present status of processing for delivery of the product corresponding to the order, a present status of processing for payment processing for the trading, and the trading identifier (113); and comparing the trading identifier included in the trading information with the trading identifier included in the trading processing information, and outputting a warning if they are not coincident, and adding the trading processing information to the trading information stored in the storage device if they are coincident (118). An electronic commerce support method for managing trading in a server (220) for providing a plurality of clients (210) with electronic commerce services, includes the steps of: receiving an order for a product in the electronic commerce in response to an input by a user from a client through a communication network (230), and performing order acceptance processing for the product in accordance with a predetermined electronic commerce processing (121); transmitting to the client trading information including a trading identifier associated with the order and data on the

contents of the order (123); creating trading processing information including a present status of processing for processing initiated for the order, a present status of processing for delivery of the product corresponding to the order, a present status of processing for payment processing for the trading, and the trading identifier, and transmitting the trading processing information to the client (136); and managing the present status of processing for the processing initiated for the order, the present status of the processing for delivery of the product corresponding to the order, and the present status of processing for the payment processing for the trading until the order processing, the delivery, and the payment processing are completed (137).

FIG. 1



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aging trading in a server for providing a plurality of clients with electronic commerce services, comprises the steps of:

receiving an order for a product in the electronic commerce in response to an input by a user from a client through a communication network, and performing order acceptance processing for the product in accordance with a predetermined electronic commerce processing;

transmitting to the client trading information including a trading identifier associated with the order and data on the contents of the order;

creating trading processing information including a present status of processing (processing progress status) for processing initiated for the order, a present status of processing for delivery of the product corresponding to the order, a present status of processing for payment processing for the trading, and the trading identifier, and transmitting the trading processing information to the client; and managing the present status of processing (processing progress status) for the processing initiated for the order, the present status of the

(processing progress status) for the processing initiated for the order, the present status of the processing for delivery of the product corresponding to the order, and the present status of processing for the payment processing for the trading until the order processing, the delivery, and the payment processing are completed.

Trading for which delivery has been completed may be displayed separately from trading for which delivery has not been completed, from the present status of processing for delivery included in the trading information, and trading which have been payed or settled may be displayed separately from trading which have not been payed or settled, from the present status of processing for payment processing for the trading. In addition, a total amount of money for products included in the trading which have not been settled or unpayed may be calculated and displayed. The total amount of money may be compared with a predetermined limit amount, such that a warning is outputted if the total amount of money for the products exceeds the limit amount. Information on a product to be returned may be inputted based on the displayed trading information, and transmitted to the server.

BRIEF DESCRIPTION OF THE DRAWINGS

Fig. 1 is a block diagram illustrating a system configuration according to an embodiment of the present invention;

Fig. 2 is a flow chart illustrating overall processing executed in an electronic commerce support method according to one embodiment of the present invention:

Fig. 3 is a flow chart illustrating in detail the overall

processing executed in the electronic commerce support method of Fig. 2;

Fig. 4 is a block diagram illustrating a system configuration according to an embodiment of the present invention;

Fig. 5 shows a screen for inputting order information in the embodiment of the present invention;

Fig. 6 shows tables for storing data related to order processing in the embodiment of the present invention;

Fig. 7 is a flow chart illustrating the order acceptance processing in the embodiment of the present invention:

Fig. 8 shows trading information in the embodiment of the present invention;

Fig. 9 illustrates a screen for displaying the trading information in the embodiment of the present invention;

Fig. 10 is a flow chart illustrating the order processing in the embodiment of the present invention;

Fig. 11 is a flow chart illustrating order processing status creation in the embodiment of the present invention;

Fig. 12 shows order processing status information in the embodiment of the present invention;

Fig. 13 is a flow chart illustrating the processing of transmitting the order processing status in the embodiment of the present invention;

Fig. 14 shows delivery processing status information in the embodiment of the present invention;

Fig. 15 shows payment processing status information in the embodiment of the present invention;

Fig. 16 illustrates a screen for displaying a present status of processing for a trading in the embodiment of the present invention;

Fig. 17 is a flow chart illustrating the processing for requesting a present status of processing for a trading in the embodiment of the present invention;

Fig. 18 illustrates a screen for inputting a present trading processing status request schedule in the embodiment of the present invention;

Fig. 19 illustrates a warning display screen in the embodiment of the present invention;

Fig. 20 is a flow chart illustrating the product return processing in the embodiment of the present invention; and

Fig. 21 is a flow chart illustrating the reorder processing in the embodiment of the present invention.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

An embodiment of the present invention will hereinafter be described in detail with reference to the accompanying drawings.

Reference is first made to the general configuration of an electronic commerce system illustrated in Fig. 1.

configuration illustrated in Fig. 1 through the network 230. Since the rest of the configuration in Fig. 4 is identical to Fig. 1, explanation thereof is omitted. The delivery managing server 410 and the payment managing server 420, which have the same device configuration as the shopping server 220, each comprise a computer, a storage device, and a communication cable.

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Next, respective processing steps illustrated in Fig. 3 will be described in detail along the flow of the processing in Fig. 3.

<Step 111> Client: Transmission of Order:

The client 210 accesses the shopping server 220 using communication software such as an Internet browser, a Web browser or the like installed in the computer 211, and acquires product information. Then, the client 210 selects and determines a product to be ordered on the basis of the received product information, and creates order information to be transmitted to the shopping server 220. A screen for creating the order information is illustrated in Fig. 5 as an order information input screen 500. The order information input screen 500 includes a purchased product list 510, a payment method input area 520, a delivery method input area 530, and a personal information input area 540. The purchased product list 510 indicates the name, quantity, and price of each ordered product. In the payment method input area 520, a payment method for ordered products is selected from means such as a credit card, electronic money, and so on, and ID information and so on are inputted for the ordered products. In the delivery method input area 530, a delivery method is selectively inputted, such as a home delivery service or the like. In the personal information input area 540, the name, address, telephone number, and "where to contact" such as an E-mail address are inputted. When an "OK" button 550 is selectively inputted through the input device 212 after required items in each input area have been inputted using the input device 212, the inputted order information is transmitted to the shopping server 220 through the communication cable 215 and the communication network 230.

<Step 121> Server: Order Acceptance Processing:

The shopping server 220 receives order information through the communication network 230. Then, the shopping server 220 executes the order acceptance processing in accordance with an electronic commerce processing corresponding to the received order information from electronic commerce processing 600 previously stored in the storage device 222. Fig. 6 shows an outline of the electronic order processing 600. A payment method column 611 shows a list of payment methods, while a payment processing column 612 contains a processing required by each payment method.

Stated another way, a payment processing corre-

sponding to a payment method specified by order information is executed in accordance with the electronic commerce processing 600. Similarly, a delivery method column 621 shows a list of delivery methods, while a delivery processing column 622 indicates a processing corresponding to each delivery method. The payment processing and the delivery processing include the order of processing corresponding to each method, and the addresses of the payment managing server and the delivery managing server required for the processing. The payment methods include, for example, credit card payment, electronic money payment, transfer of funds between bank accounts, and so on. The delivery methods include, for example, home delivery, transmission of electronic goods such as software through a network,

Fig. 7 illustrates detailed steps of the order acceptance processing 121 when the credit card payment, for example, is selected in order information. The shopping server 220 requests the payment managing server 420 to authenticate whether an orderer has a settling capability (step 701). For this purpose, the shopping server 220 transmits necessary information for the authentication such as the name, address, telephone number, credit card number, card available period, and so on within the order information from the client 210 to the payment managing server 420 at a predetermined destination address. Next, the shopping server 220 receives the result of the requested authentication from the payment managing server 420 (step 702).

<Step 122> Server: Creation of Trading Information:

The shopping server 220 creates trading information 800 indicative of the contents of a contract associated with order information.

Fig. 8 shows an example of the trading information 800. The trading information 800 includes an order ID 801 for identifying a trading; order specific information 802 indicative of the contents of an order such as a purchase date, product name, quantity, and price; payment information 803 related to a method of proceeding the trading (payment method, E-mail address of payment institution); delivery information 804 (delivery method, 45 E-mail address of delivery service provider); and orderer information 805 for identifying the orderer such as a buyer name, E-mail address, delivery destination address, and so on.

The shopping server 220 stores the created trading information 800 in the storage device 222.

<step 123> Server: Transmission of Trading Information:

The shopping server 220 transmits the trading information 800 indicative of the contents of a contract associated with order information to the client 210. In this event, information related to the name of a shop and the

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trading to which the requested order processing status 1200 is related. The shopping server 220 searches the storage device 222 for the order processing status 1200 corresponding to the trading ID contained in the request, based on the request for the order processing status from the client 210 (step 1302). Then, the shopping server 220 transmits the retrieved order processing status 1200 to the client 210 which is the requester of the order processing status (step 1303).

<Step 137>

If the order processing status transmitted at step 136 shows that the order processing has not been completed, the processing is continuously repeated from the order processing at step 134 onward.

Reference is next made to a trading processing, creation of a trading processing status, and transmission performed by the delivery managing server 410 and the payment managing server 420.

<Steps 144, 154> Delivery Managing Server, Payment Managing Server: Delivery Processing, Payment Processing:

In response to the order processing at step 134 executed by the shopping server 220, the payment managing server 420 of a payment institution associated with the order receives payment instructing information, while the delivery managing server 420 of a delivery service provider associated with the order receives delivery instructing information. Then, the delivery managing server 410 and the payment managing server 420 execute payment processing and delivery processing based on the received payment instructing information and delivery instructing information, respectively. The payment processing is made after client examination is passed at a CAFIS (Credit and Finance Information System) center, and includes notifying a seller of payment for sales, paying the seller for the sales, calculating a debited amount, notifying the buyer of a date on which a specified account is debited, together with the debited amount, debiting the amount from the account on the debiting date, and so on.

A home delivery operation is performed in response to a delivery instruction in the order of collection of products to be delivered, concentration of products to a terminal, distribution of products to respective destination regions, transport of products between terminals, delivery, and so on. A home delivery information system collects and manages information on each ordered product from an associated operation site each time activities such as collection, distribution, transport, and delivery of the product take place. In this event, a scheduled home delivery date is calculated and managed together with the foregoing information. Alternatively, the payment processing and the delivery processing may be executed in a different system connected through a net-

work

<Steps 145, 155> Delivery Managing Server, Payment Managing Server: Creation of Delivery Processing Status, Creation of Order Processing Status:

A delivery processing status 1400 and a payment processing status 1500 are created based on the delivery processing and the payment processing executed at steps 144, 154, respectively. Fig. 14 shows the delivery processing status 1400, and Fig. 15 shows the payment processing status 1500. The delivery processing status 1400 includes information 1401 as to whether an associated product has been delivered or not and a scheduled delivery date or a delivery completed date 1402, corresponding to the trading information 800. The payment processing status 1500 includes information 1501 as to whether an associated order has been settled or not, and a scheduled payment date or a settled date, corresponding to the trading information 800.

<Steps 146, 156> Delivery Managing Server, Payment Managing Server: Transmission of Delivery Processing Status, Transmission of Payment Processing Status:

The delivery managing server 410 and the payment managing server 420 transmit the delivery processing status 1400 and the payment processing status 1500 created at steps 145, 155, respectively, to the client 210 through the communication network 230. Alternatively, the transmission of the delivery processing status 1400 and the payment processing status 1500 may be executed in response to a request from the client 210. Since the transmission at steps 146, 156 is substantially the same as that of the shopping server described at step 136, detailed explanation is omitted.

<Steps 147, 157> Delivery Managing Server, Payment Managing Server:

If the delivery processing status and the payment processing status transmitted at steps 147, 157 show that the delivery processing and the payment processing have not been completed, the processing is continuously repeated from steps 144, 154 onward.

Next described is the processing executed in the client 210 for updating a present status of processing for a trading.

<Step 113> Client: Reception of Present Status of Processing for Trading:

The client 210 receives a present status of processing for a trading from each of the shopping server 220, the delivery managing server 410, and the payment management server 420 through the network 230.

Fig. 16 illustrates an example of a screen 1600 for displaying the present status of processing for trading.

shopping server 220 in the trading information through the communication network 230. Assume that "return" used herein also includes cancellation of a trading. The shopping server 220 receives the return requesting information, and takes appropriate actions such as cancellation of the trading processing corresponding to the trading identifier, refund processing, and so on.

Thus, according to this specific example, it is possible to smoothly execute the return processing depending on various situations such as delayed delivery, unsettled trading, and so on.

Reference is next made to a third specific example of the present invention. The third specific example illustrates that another order is placed, after the acquisition of the present status of processing for a trading, based on trading information.

Fig. 21 illustrates a processing flow of the third specific example. This processing flow is substantially the same as the processing flow of the client 210 illustrated in Fig. 2. A difference is that Fig. 21 includes, after step 116, step 2101 at which it is determined whether or not the client has an intention of placing a new order, followed by the processing jumping to the order processing at step 111, if the client has such intention, to utilize trading information. Thus, explanation on steps 111 - 116 is omitted.

<Step 2101> Input of Presence or Absence of Intention of Placing Reorder:

The input device 212 is used to input the presence or absence of an intention of placing a new order. Specifically, new order processing is executed only by selecting desired trading information in the trading information list 1603 and selectively inputting a "reorder" button 1606 in the present trading processing status display screen 1600. When the "reorder" button 1606 is inputted, the processing branches to step 111.

<Step 111> Order Processing:

An order information input screen similar to that of Fig. 5 is displayed. In this event, information required for the order has already been inputted based on the trading information selectively inputted at step 114. If some order information is to be changed, the input device 212 is used to input a change, and the "OK" button 550 is selectively inputted, causing the contents of a trading associated with the reorder to be transmitted to the address of the shopping server in the trading information through the communication network 230.

Thus, according to this specific example, since a new order can be placed making the most of previous trading information, a reorder can be simply placed, particularly for frequently ordered products such as daily necessaries, without inputting all order information from the beginning.

As mentioned above, transmission and reception of

trading information between a client and a server are performed through a communication network. For this reason, the trading information must be secured from tapping, violence, and so on. For the security purpose, the following method is used.

A variety of information communicated between a server and a client is encrypted. Cryptology used in the encryption may be either of a public key cryptography such as Rivert-Shamir-Adleman (RAS) and a common key cryptography such as Data Encryption Standard (DES). This countermeasure can prevent trading information from being intercepted or violated by a third party, thereby making it possible to ensure safe trading and protection of privacy.

The programs for executing the processing illustrated in Figs. 2, 3, 20, and 21 may be stored in a portable storage means such as a floppy disk, an optical disk, or the like such that the programs are read into a main storage device of a processing system, upon execution, for performing the processing.

While the foregoing embodiment has been described in connection with a readily appreciable relationship between a client and a server, it goes without saying that the present invention is also applicable to other apparatus having the relationship of providing and enjoying similar services.

Claims .

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 An electronic commerce support method for managing trading in a client (210) connected to a server (220) for providing electronic commerce services to receive the electronic commerce services, comprising the steps of:

transmitting an order for a product on the electronic commerce in response to an input by a user to said server through a communication network, receiving trading information including a trading identifier associated with said order and data on the contents of said order from said server, and storing said trading information in a storage device (214) (111,112);

receiving from said server trading processing information including a present status of processing for processing initiated for said order, a present status of processing for delivery of said product corresponding to said order, a present status of processing for payment processing for said trading, and the trading identifier (113); and

comparing said trading identifier included in said trading information with said trading identifier included in said trading processing information, and outputting a warning if they are not coincident, and adding said trading processing information to said trading information stored in

receiving said present status of processing for said delivery from said delivery managing server (113).

12. A method according to claim 11, further comprising the step of:

sending to said shopping server a transmission request for order processing information including a trading identifier included in said trading information received from said shopping server in order to receive said present status of processing for the processing for said order from said shopping server (1702).

13. A method according to claim 11, further comprising the step of:

sending to said payment managing server a transmission request for payment managing processing information including the trading identifier included in said trading information received from said shopping server in order to receive said present status of processing for said payment processing for trading from said payment managing server (1702).

14. A method according to claim 11, further comprising the step of:

sending to said delivery managing server a transmission request for delivery managing processing information including the trading identifier included in said trading information received from said shopping server in order to receive said present status of processing for said delivery from said delivery managing server (1702).

15. An electronic commerce support method for managing trading in a server (220) for providing a plurality of clients (210) with electronic commerce services, comprising the steps of:

receiving an order for a product in the electronic commerce in response to an input by a user from a client through a communication network (230), and performing order acceptance processing for said product in accordance with a predetermined electronic commerce processing (121);

transmitting to said client trading information including a trading identifier associated with said order and data on the contents of said order (123);

creating trading processing information including a present status of processing for processing initiated for said order, a present status of processing for delivery of said product corresponding to said order, a present status of processing for payment processing for said trading, and the trading identifier, and transmitting said trading processing information to said client (136); and

managing the present status of processing for the processing initiated for said order, the present status of the processing for delivery of said product corresponding to said order, and the present status of processing for the payment processing for said trading until the order processing, the delivery, and the payment processing are completed (137).

16. A method according to claim 15, further comprising the step of:

searching for the present status for the processing for said order, the present status of the processing for delivery of said product corresponding to said order, and the present status of processing for the payment processing for said trading, based on a trading identifier involved in a request from a client, to create trading processing information, and transmitting said trading processing information to said client (1302, 1303).

30 17. A client (210) connected to a server (220) for providing electronic commerce services to receive the electronic commerce services, comprising:

an order transmitting device (111, 112) for transmitting an order for a product on the electronic commerce in response to an input by a user to said server through a communication network (230), receiving from said server trading information including a trading identifier associated with said order and data on the contents of said order from said server, and storing said trading information in a storage device (214);

a trading information acquiring device (113) for receiving from said server trading processing information including a present status of processing for processing initiated for said order, a present status of processing for delivery of said product corresponding to said order, a present status of processing for payment processing for said trading, and the trading identifier; and

an updating device (118) for comparing said trading identifier included said trading information with said trading identifier included in said trading processing information, and outputting a warning if they are not coincident, and adding said trading processing information to said trad-

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server through a communication network (230), receiving from said server trading information including a trading identifier associated with said order and data on the contents of said order from said server, and storing said trading information in a storage device (214);

a storage component having a code sequence for realizing the step (113) of receiving from said server trading processing information including a present status of processing for processing initiated for said order, a present status of processing for delivery of said product corresponding to said order, a present status of processing for payment processing for said trading, and the trading identifier; and

a storage component having a code sequence for realizing the step (118) of comparing said trading identifier included said trading information with said trading identifier included in said trading processing information, and outputting a warning if they are not coincident, and adding said trading processing information to said trading information stored in said storage device if they are coincident.

26. A storage medium according to claim 25, further comprising:

a storage component having a code sequence for realizing the step (114, 115) of comparing said data on the contents of said order with said present status of processing for the processing initiated for said order, said present status of processing for delivery of said product corresponding to said order, and said present status of processing for the payment processing for said trading included in said trading processing information, and outputting a warning if erroneous conditions are included.

27. A storage medium having an electronic commerce support program provided in a server (220) for providing electronic commerce services to a plurality of clients (210), said program being readable by a CPU in said server for managing trading, said storage medium comprising:

a storage component having a code sequence for realizing the step (121) of receiving an order for a product on the electronic commerce from a client in response to an input by a user through a communication network (230), and performing order acceptance processing for said product in accordance with a predetermined electronic commerce processing; a storage component having a code sequence for realizing the step (123) of transmitting to said client trading information including a trad-

ing identifier associated with said order and data on the contents of said order;

a storage component having a code sequence for realizing the step (136) of creating trading processing information including a present status of processing for processing initiated for said order, a present status of processing for delivery of said product corresponding to said order, a present status of processing for payment processing for said trading, and the trading identifier, and transmitting said trading processing information to said client; and a storage component having a code sequence for realizing the step (137) of managing the present status of processing for the processing initiated for said order, the present status of the processing for delivery of said product corresponding to said order, and the present status of processing for the payment processing for said trading until the order processing, the delivery, and the payment processing are completed.

28. A storage medium having an electronic commerce support program provided in a shopping server (220) for providing electronic commerce services to a plurality of clients (210), said program being readable by a CPU in said shopping server for managing trading, said storage medium comprising:

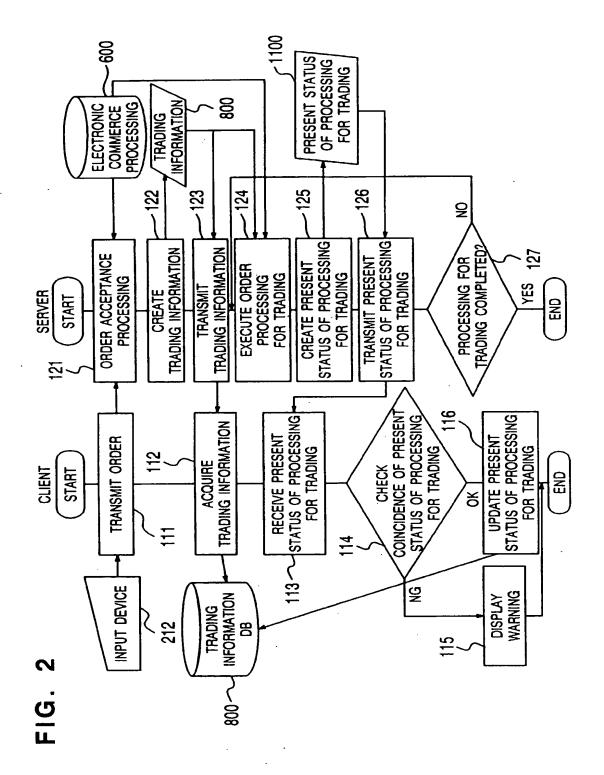
a storage component having a code sequence for realizing the step (121) of receiving an order for a product on the electronic commerce from a client in response to an input by a user through a communication network (230), and performing order acceptance processing for said product in accordance with a predetermined electronic commerce processing;

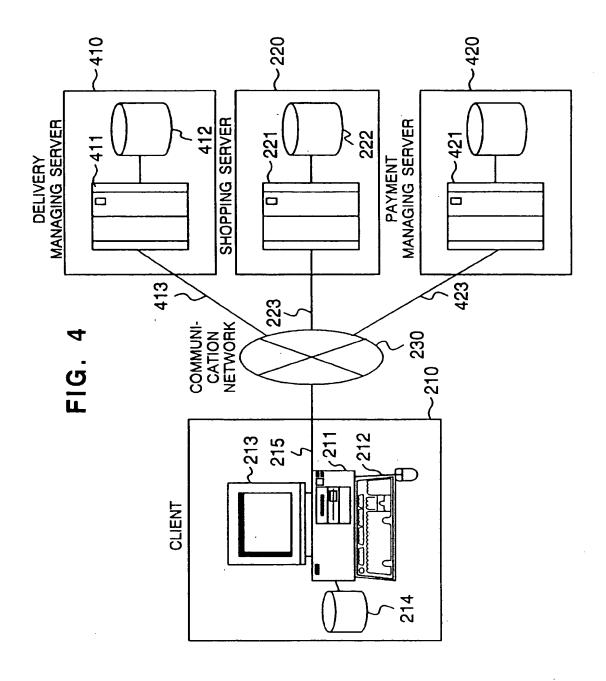
a storage component having a code sequence for realizing the step (123) of transmitting to said client trading information including a trading identifier associated with said order and data on the contents of said order;

a storage component having a code sequence for realizing the step (136) of transmitting to said client a present status of processing for processing initiated for said order;

a storage component having a code sequence for realizing the step (134) of transmitting a request for delivery of said product corresponding to said order to a delivery managing server (410) connected to said shopping server; and a storage component having a code sequence for realizing the step (134) of transmitting a request for payment processing for said trading to a payment managing server.

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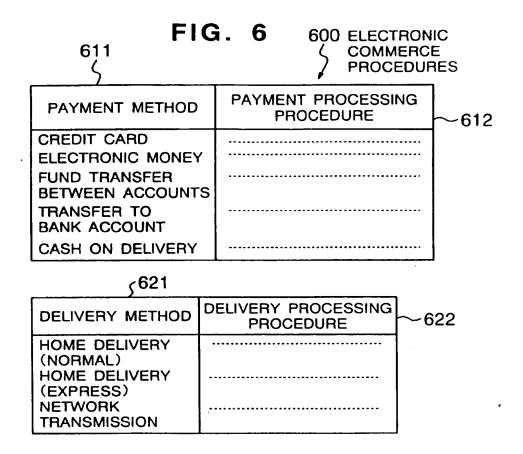


FIG. 7
ORDER ACCEPTANCE PROCESSING 121

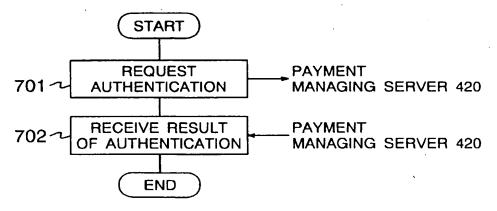


FIG. 10
ORDER PROCESSING 134

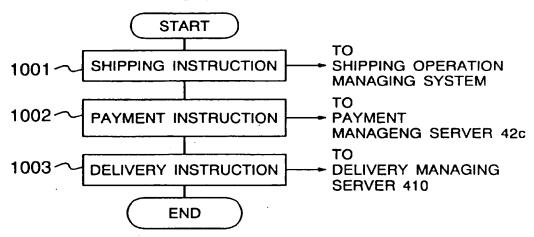


FIG. 11
CREATION OF ORDER

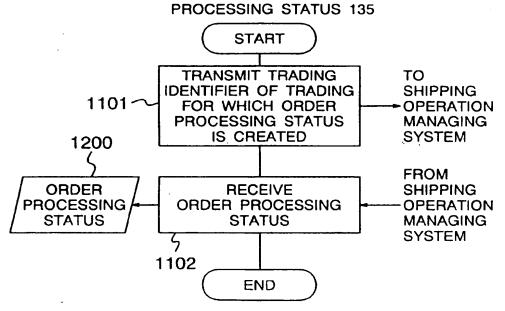


FIG. 14

DELIVERY PROCESSING STATUS 1400

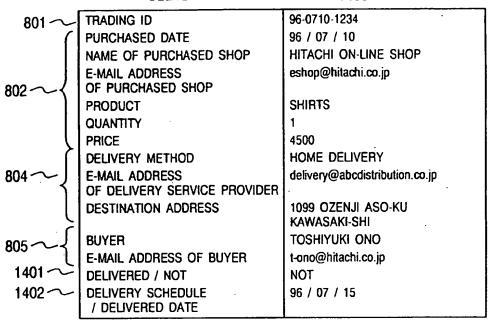


FIG. 15

PAYMENT PROCESSING STATUS 1500

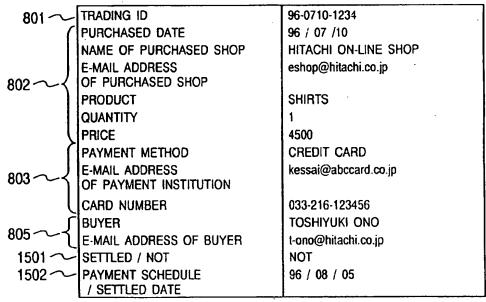


FIG. 18

PRESENT TRADING PROCEDURE STATUS REQUEST SCHEDULE SCREEN 1800

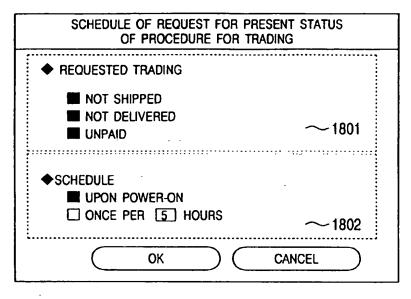


FIG. 19

WARNING DISPLAY SCREEN

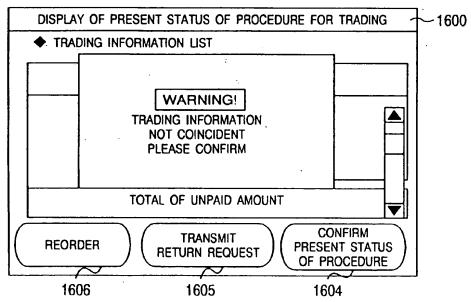


FIG. 21

